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ABSTRACT

The need for a system of nursing education has never been greater. This project's goal was to emphasize a coordinated structure of educational programs for all nurses in the south. The text concerns new directions in health care, implications for nursing education, and assessing nursing needs. Southern nursing programs are then examined by type, productivity, quality, and expertise. Appendixes include supplementary education and health data by State and project seminar members. (PG)

Nursing Education In The South 1973

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PATHWAYS TO PRACTICE, Vol. 1

Nursing Curriculum Project

SOUTHERN REGIONAL EDUCATION BOARD
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PREFACE

With this volume, the Nursing Curriculum Project (known officially as Regional Action to Improve Curriculums in Nursing Education) launches a series of publications to be entitled *Pathways to Practice.* The series title is intended to emphasize the plural—pathways—for it is the project's goal to recommend a coordinated structure of educational programs for all nurses. As if the confusion over today's non-system of nursing education were not problem enough, the project is working against the pressure of the on-rushing future; foreseeable changes in the nation's and the Southern region's health care delivery system are bound to exacerbate today's problems. The need for a system of nursing education has never been greater.

But one cannot leap precipitously into the future, ignoring the status quo, without paying a high price. One gets *there* from *here*—thus, this first volume, which brings together the most recent facts we could find about nursing education in the South today. These are facts that, for the most part, are generally available, but they are facts that are rarely brought together in such a way as to illuminate, state by state and for the region as a whole, the situation with which we must deal as the project begins to move forward.

The project staff and seminar members (who are listed in an appendix at the end of the volume) are finding this kind of resource material indispensable to their work on the project's goals, and it is our hope that health professionals throughout the South will also find this fact book a helpful reference.

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December 1973
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New Directions in Health Care

Curriculum planning for the health sciences has become a matter of vital concern. Several social forces have exploded to make the subject a pressing issue not only in educational communities and governmental agencies but for the consumer as well.

One such force, attested to by the many commissions and task forces, is the failure of the existing health care system to produce the optimum in services that American citizens want and can afford. The National Advisory Commission on Health Manpower announced quite cogently as early as 1967 that the country's system of health care was a non-system with gaps and duplications, one which poorly integrates efforts and needs. The expenditures for health in this country are the highest in the world, but one-fourth of the population is significantly underserved. In 1972, 7 per cent of the gross national product was spent for health and the bill continues to rise, due almost entirely to increased costs for the same services. Saward (1973) predicts that "by about 1984 health care will represent at least 8 per cent of the gross national product and quite possibly almost 9 per cent." The price of a hospital bed in the year 2000 will be out of the reach of all but the extremely wealthy.

Support for prepaid group practice and a sufficient number of health maintenance organizations by 1980 to serve 90 per cent of the population is growing. The health maintenance organizations will emphasize: prevention and early care, decreased costs, increased productivity from resources, better geographic distribution of care, and the mobilization of private capital and managerial talent. Support is also growing for some form of universally available "basic set of personal health-service benefits" (Saward, 1973), possibly for national health insurance. Depending on the manner of financing that is proposed, the cost to the taxpayer would vary. Fully nationalized health insurance is predicted to cost 90 billion dollars by the turn of the century (Sisson, 1973).

Another social force is the fundamental change in society's concept of health care. Health care is increasingly seen as a right rather than a privilege. National goals are being refocused on the prevention of illness and the maintenance of health.

Knowledge about health and disease continues to expand at exponential rates, and the future promises even more acceleration. Breakthroughs of vast social impact are occurring in the biological sciences. Antigen rejection problems are being solved, meaning that thousands of organ transplants will be possible. Within a decade immune tolerances for specific antibodies will be established, viral diseases will be con-

trolled, and many forms of cancer will be curable. Within thirty years large and complex molecular proteins, nucleic acids, and viruses will be developed on demand. Cloning will be possible within a generation, and genetic defects may be correctable *in utero*. Clearly, continuing education will be mandatory for all health workers.

Breathtaking advances in technology are occurring as well. The computer revolution is here. Automation coupled with the use of the computer will cause job obsolescence for many. An automated clinical laboratory providing services for a city will require fewer technologists than a non-automated laboratory serving a single hospital. Computers are already in use on some nursing units. Record-keeping functions and some management responsibilities will be drastically changed. Computer consoles, located in the offices of hospital staff physicians, will be giving immediate feedback to medical orders. Medications will be prescribed by use of the computer and come to the nursing unit prepared in single dosages. Computers will be used for assistance in diagnosis and in the planning of treatment strategies. Computer-driven self-diagnosis consoles may even be available to future consumers. Communication systems, including the use of satellites, will improve so that a rapid exchange of information may occur to even the remotest areas. Telecommunications will also be used by para-professionals in rural or isolated areas for diagnosis and prescription by professionals in medical centers.

The social forces just described illustrate such overriding cultural developments as increasing information, constant change, and the rapid pace at which both occur. Choice is inevitable. The clear choices in health range from comprehensive health care for all to an even more sophisticated technology available to the elite. The choices in curriculum planning are more amorphous. The time has recently passed when the professional alone could determine the purposes and outcomes of highly individual and loosely related programs. A demand for accountability and responsiveness, for optimal use of material and human resources, may erode isolationism, single-purpose programs, and even the traditional bureaucratic structure in both service and education.

Social issues become catalysts for change.

Implications for Nursing Education

The crisis in the present health care system has resulted in proposals for far-reaching changes in curricula for health education. Not since the Flexner report on medical education in 1910 have the desire and opportunity for change in professional education been so pervasive. The Carnegie Commission on Higher Education and the Nation's Health has praised deviation from a curriculum design most adherent to the

German research ideal for medicine. Health care delivery models, integrated science models, and the traditional Flexner model are elements contributing to the evolution of new designs. Twenty-six of the nation's medical schools are reporting shortened programs, for the moment an option most open to exceptional students, but an idea which may become a program for the many. Other proposals include designs for vertical and horizontal mobility creating new degrees for lesser levels of competency.

The same forces for change are at issue in nursing, but the direction for movement is less certain. Nursing is an emerging profession with a toe-hold in the university, the home of occupations wishing to become professions. Its curricular purposes are more unsettled, issues of high impact less resolved, and school and program objectives less clear when translated to clinical practice. Expertise resides with the few. A role structure (i.e., categories of personnel possessing different competencies) with meaning for the practitioner and the employing agency has yet to emerge. Utilization of nurses in many settings is misaligned with preparation for practice: highly developed nursing skills are unused, understandings weakened, and new graduates co-opted into the unyielding bureaucratic structure of many hospitals.

The National Commission for Study of Nursing and Nursing Education (Lysaught, 1970) recommended that "no less than three regional or inter-institutional committees" be established for the study and development of the nursing curriculum. These studies are to be similar to previous national studies in the biological, physical, and social sciences. "Objectives, universals, alternatives and sequences for nursing instruction" are to be developed. "Appropriate levels of general and specialized learning for different types of educational institutions" are to be specified. "Particular emphasis is to be given to articulation of programs between the two collegiate levels."

In October 1972, the Nursing Curriculum Project of the Southern Regional Education Board (SREB) was begun pursuant to the recommendations of the Commission and the wishes of the SREB Nursing Council. The Council, composed of the deans and directors of associate and baccalaureate degree nursing programs in 14 Southern states,* after study of the Commission's report, recommended regional action to improve nursing curriculums. It was the Council's belief that change in nursing education was essential to facilitate coordination and articulation between programs. The W. K. Kellogg Foundation agreed to fund the project for three years.

*Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia.

The specific purpose of the SREB Nursing Curriculum Project is to describe and differentiate the types of nursing personnel needed for the future, based on the needs of the people in the region for health services which can best be provided by nursing personnel, and to propose ways in which these nurses can best be educated.

Assessing Nursing Needs

One of the traditional strategies for analyzing health care needs is to review manpower data collected by governmental agencies and occupational organizations. Such data as are available are usually dated and always relatively meaningless unless used in a theoretical frame of reference to match the existing or future health care delivery system. Furthermore, existing data tell little about the distribution of health care workers. Although some form of national health care insurance is inevitable, it is difficult if not impossible to predict the organizational structure. As Blum so cogently observes:

> Until there's some notion of how . . . different kinds of manpower are going to relate to one another within the delivery system, there will be places where some . . . couldn't possibly be used and there are places where the kind that are being trained are going to be marvelously well suited. . . . Many of the people we're training today will have to be retrained many times in their lifetime . . . the prototypes . . . today aren't necessarily going to hold up when the organizational structure settles down and those organizational structures are going to change many times with technology and other ways of looking at things. (1971, pp. 122–123)

The role structure of the nursing prototype will be changing; as a consequence, nurses will be changing their "ways of looking at things." Nurses have fervently sought professional status since the late 1800's. Remarkably competent and talented leaders have aggressively pursued aims and values yet to be achieved. The chasm existing between expectations expressed on paper and the actual accomplishments of most members of the discipline is one that must be bridged.

The most serious gap in matching expectation to reality is a vast shortage of nursing expertise. The lack of nurses educationally prepared for college teaching, clinical specialization, administration, and research is appalling. Approximately 700 nurses nationally hold doctoral degrees, considered by many as the union card for university teaching and research. Employers of faculty for the nearly three hundred baccalaureate programs, not to mention the graduate programs, must settle for

the educational preparation that the available nurse teachers have. Only 18,300 nurses hold a master's degree, the lowest degree recommended for clinical specialization and administration. Donna Diers (1972) reports that of the 676 nurses holding doctoral degrees listed in *Nursing Research* in 1971, only 21 indicated any real research activity, although an additional 171 said that research was part of their responsibilities. The 192 total represents .04 per cent of the population of employed nurses, a shockingly low proportion.

For years the hue and cry has been about shortages of bedside nurses for hospitalized clients, but the problems and needs for nursing services cannot be approached by counting the numbers of these practitioners. The problem is partly one of distribution. There are certainly not enough nurses in certain places and in certain jobs. Some geographic areas, most often rural or inner city, are underserved by all health care workers including nursing. The lower economic levels of society do not have the nurses they need. The aged, the chronically ill, the mentally ill are underserved. On the other hand, some metropolitan areas are experiencing a surplus of nurse applicants for the jobs available. The problems of quantity are being solved, but the problems of quality are still at issue.

In 1966, the American Nurses' Association (ANA) adopted a position paper recommending that two levels of nurse practitioners be prepared, one at the technical level, widely interpreted to mean diploma and associate degree preparation, and one at the professional level, a baccalaureate degree holder at the very least. Not unexpectedly, this paper led to a relatively deep division among the faculties and graduates of the various educational programs. Many employing agencies continued to insist that "a nurse is a nurse" regardless of educational preparation. Many physicians and other health care workers proclaimed the promise of one type of graduate over another, so that some programs seemed buoyed on the strength of emotional response alone. Listings of the characteristics of technical and professional nurse graduates began to appear, but the one study (Waters, *et al.*, 1972) which has been published failed to show clearcut differences at least in the decision-making arena.

NURSING EDUCATION IN THE SOUTH, 1973

To assess educational needs in planning for nursing education in the future, we need to know, in gross terms at least, what we already have now that we should build upon or modify. Among our first questions are: How many educational programs do we have? How many do we need? How do the number and size of programs relate to the supply of nurses?

In Table I (page 7) we begin to get a few answers.* Comparable figures for medicine are shown, not because we are advocating a medical model for nursing education, but rather because medical and nursing education experience some of the same problems. Both are considered costly compared to many other professional curricula. Both are attempting to provide skilled practitioners in fields thought to be notoriously undersupplied. Both curricula have highly developed clinical components requiring faculty supervision and agency affiliation.

Both regionally and nationally we have approximately twice as many nurses as we do physicians; but we have about *ten times as many programs* to prepare RNs as we have medical schools. Nursing programs averaged 37.6 graduates each in 1972 nationally, 31.1 in the SREB states—in other words their productivity in terms of numbers of graduates per program was less than half that of medical programs.

It would be unfair and unrealistic to push comparisons with medical education too far. In any event, in nursing we are concerned with programs at two levels—technical and professional—not just professional alone. In raising the question of numbers of programs, it is necessary to look more closely at the three types of programs preparing nursing students for RN licensure.

Types of Nursing Education Programs

Two major forces have been operating on decisions to establish nursing education programs, both regionally and nationally, in recent years. On the one hand has been the movement toward expansion of the nursing workforce by expanding numbers of educational programs. Partially counter to that has been response to the ANA position paper of 1966, which has encouraged the closing of a good many diploma programs. As a result of the interaction of these two forces, programs were opening and closing in 1972 at a surprising rate. In the National League for Nursing's *State Approved Schools of Nursing—R.N.* (1973), 89 diploma programs with current enrollment were listed as closing, 21 of them in the SREB states; and to close the presumed gap between nursing needs and nurse availability, 34 baccalaureate and 85 associate degree programs in the region alone were new or developing. Table II (page 8) shows the numbers of diploma, associate degree, and baccalaureate programs in the South, with percentages indicated in each category.

In the SREB states slightly more than half the RN-preparatory pro-

*In this table, as in all tables, figures are incomplete for the following states in the following categories because in each case figures are not available for one school: diploma—Mississippi; associate degree—Alabama, Mississippi, South Carolina; baccalaureate—Florida, Virginia.

TABLE I

Educational Programs in Nursing and Medicine: SREB States

(1) State	(2) MDs per 100,000 (1971)	(3) RNs per 100,000 (1972)	(4) No. Med. Schools (1973)	(5) No. Graduating (1972)	(6) Av. Size Grad. Class	(7) No. RN Progs. (1972–73)	(8) No. Graduating (1971–72)	(9) Av. Size Grad. Class	(10) Total Population (1972–est.)
Alabama	91	223	1	87	87.0	23	627	27.2	3,510,000
Arkansas	95	190	1	96	96.0	9	303	33.6	1,978,000
Florida	162	353	3	163	54.3*	29	1,358	46.8	7,259,000
Georgia	112	263	2	170	85.0	30	880	29.3	4,720,000
Kentucky	104	256	2	172	86.0	23	714	31.0	3,299,000
Louisiana	123	245	2	253	126.5	15	469	31.2	3,720,000
Maryland	192	363	2	244	122.0	25	989	39.6	4,056,000
Mississippi	83	226	1	81	81.0	17	284	16.7	2,263,000
North Carolina	113	317	3	227	75.6	46	998	21.7	5,214,000
South Carolina	97	295	1	81	81.0	15	352	23.4	2,665,000
Tennessee	122	233	3	328	109.3	26	817	31.4	4,031,000
Texas	123**	240	5	405	81.0*	45	1,817	40.3	11,649,000
Virginia	119	348	2	219	109.5	38	965	25.3	4,764,000
West Virginia	129	350	1	6	6.0	16	529	33.0	1,781,000
SREB States	115	279	29	2,532	84.4	357	11,102	31.1	58,931,000**
U.S.A.	149	380	101	8,637	85.5	1,377	51,784	37.6	203,166,000**

*One school in the state was new and produced no graduates that year.
**1970 figures.

EXPLANATION & SOURCE—COLUMN:
(2) Number of MDs not including those employed by the federal government, per 100,000 population. Source: Willard, 1973.
(3) Source: American Nurses' Association, Statistics Department, 1972 Inventory of Registered Nurses.
(4) Source: Willard, 1973.
(5) Source: Willard, 1973.
(7) Source: National League for Nursing (NLN), *Schools of Nursing—R.N.* (1973). Programs designated as closing are included in this table.
(8) Source: NLN, *Schools of Nursing—R.N.* (1973).
(10) Total population, estimate for 1972 based on 1970 U.S. Census. Projections by SREB.

TABLE II

Nursing Programs Preparing for Beginning Practice (RN only) as of January 1, 1973, SREB States

State	Diploma N*	Diploma (NLN)**	Diploma %	Associate N*	Associate (NLN)	Associate %	Baccalaureate N*	Baccalaureate (NLN)	Baccalaureate %	All Programs N*	All Programs (NLN)	All Programs %
Ala.	9	(9)	41	8	(2)	36	5	(2)	23	22	(13)	100
Ark.	0	–	–	7	(4)	78	2	(2)	22	9	(6)	100
Fla.	1	(1)	4	20	(2)	74	6	(5)	22	27	(8)	100
Ga.	6	(5)	21	17	(11)	61	5	(3)	18	28	(19)	100
Ky.	4	(3)	18	14	(6)	60	5	(4)	22	23	(13)	100
La.	3	(3)	23	3	(1)	23	7	(5)	54	13	(9)	100
Md.	7	(7)	33	11	(3)	53	3	(2)	14	21	(12)	100
Miss.	2	(1)	12	10	(0)	59	5	(2)	29	17	(3)	100
N. C.	9	(4)	23	20	(3)	50	11	(7)	27	40	(14)	100
S. C.	1	(0)	8	9	(2)	69	3	(3)	23	13	(5)	100
Tenn.	7	(7)	28	13	(6)	52	5	(4)	20	25	(17)	100
Texas	7	(5)	17	23	(7)	56	11	(6)	27	41	(18)	100
Va.	18	(13)	47	14	(2)	37	6	(4)	16	38	(19)	100
W. Va.	3	(3)	20	9	(3)	60	3	(2)	20	15	(8)	100
SREB States	77	(61)	23	178	(52)	54	77	(51)	23	332	(164)	100
U.S.A.	444		35	535		42	289		23	1,268		100

*Not including programs designated as closing.
**Figures in parentheses represent number of NLN accredited programs.
SOURCE: NLN, *Schools of Nursing—R.N.* (1973).

grams are two-year, associate degree programs, of which 21 were newly approved by their respective states in 1971–72. The rest are about equally divided between diploma and baccalaureate. Nationally, it will be noted, the picture is slightly different, but with associate degree programs still the largest single category (42 per cent), and with diploma second (35 per cent) and baccalaureate least (23 per cent).

Clearly, both regionally and nationally associate degree programs are in the ascendancy and gaining ground. (Gerald Griffin of the NLN estimates one new associate degree program each week.) This means, of course, that we are attempting to close the supply-demand gap with technical rather than professional personnel—a perfectly reasonable approach if we can assume that we can overcome the shortcomings of the health care system by the production of numbers without reference to what they are prepared to do. *The question of differentiation, referred to earlier, re-emerges as basic and pervasive.* It becomes more so when programs preparing vocational nurses (LPN) are added into the total picture, as in the next table. It has been estimated that LPNs and aides compose from 62 to 72 per cent of the nursing service personnel in Southern hospitals (MacDonald, 1973). Tables III and IV (page 9) show the

TABLE III

Nursing Programs Preparing for Beginning Practice Including Vocational Programs as of January 1, 1973, SREB States

State	Diploma N*	Diploma %	Associate N*	Associate %	Baccalaureate N*	Baccalaureate %	Vocational N*	Vocational %
Alabama	9	18.3	8	16.3	5	10.3	27	55.0
Arkansas	0	–	7	23.0	2	6.0	22	71.0
Florida	1	2.0	20	35.0	6	10.0	30	53.0
Georgia	6	8.0	17	22.0	5	7.0	48	63.0
Kentucky	4	10.0	14	36.0	5	13.0	16	41.0
Louisiana	3	8.0	3	8.0	7	19.0	24	65.0
Maryland	7	16.0	11	25.0	3	7.0	23	52.0
Mississippi	2	6.0	10	30.0	5	15.0	16	49.0
North Carolina	9	10.0	20	24.0	11	13.0	45	53.0
South Carolina	1	2.0	9	19.5	3	6.5	33	72.0
Tennessee	7	20.0	13	39.0	5	15.0	9	26.0
Texas	7	4.0	23	13.0	11	6.0	142	77.0
Virginia	18	19.0	14	15.0	6	6.0	56	60.0
West Virginia	3	10.0	9	30.0	3	10.0	15	50.0
SREB States	77	9.2	178	21.2	77	9.2	506	60.3
U.S.A.	444	17.8	535	21.5	289	11.6	1,220	49.1

*Not including programs designated as closing.

SOURCES: NLN, *Schools of Nursing—R.N.* (1973) and *Schools of Nursing—L.P.N./L.V.N.* (1973).

TABLE IV

Enrollments in Nursing Programs Preparing for Beginning Practice Including Vocational Programs as of September 15, 1972, SREB States

State	Diploma N*	Diploma %	Associate N*	Associate %	Baccalaureate N*	Baccalaureate %	Vocational N*	Vocational %
Alabama	1,184	32	570*	16	915	25	986	27
Arkansas	0	0	1,053	49	514	24	583	27
Florida	479	8	2,872	46	1,088	18	1,788	28
Georgia	1,078	21	1,814	35	825	16	1,415	27
Kentucky	556	14	1,579	39	1,288	31	651	16
Louisiana	826	20	525	13	1,667	42	983	25
Maryland	1,042	22	1,563	33	1,213	26	862	19
Mississippi	188	7	945	36	780	29	734	28
North Carolina	1,274	19	1,484	22	2,479	37	1,453	22
South Carolina	174	7	829	31	851	32	787	30
Tennessee	1,255	23	1,696	31	1,334	24	1,231	22
Texas	1,192	8	3,236	22	5,557	38	4,588	32
Virginia	1,739	31	1,064	19	1,025	18	1,837	32
West Virginia	553	24	830	36	505	22	439	18
SREB States	11,540	16	20,060	29	20,041	28	18,337	27
U.S.A.	71,694	27	67,543	25	73,890	27	58,186	21

*Not including programs designated as closing.

SOURCES: NLN, *Schools of Nursing—R.N.* (1973) and *Schools of Nursing—L.P.N./L.V.N.* (1973).

number, percentage, and size of vocational nurse programs compared to RN programs.

It will be noted that, while vocational programs constitute 60.3 per cent of nursing education programs in the SREB states, they have only 27 per cent of total nursing enrollments. This probably reflects a tendency for even small communities needing nurses to attempt to "grow their own." Evidently more of that is going on in the South than in the nation as a whole, where vocational programs are 49.1 per cent of all programs and have 21 per cent of all nursing enrollments.

Productivity of Programs

Figures showing numbers of programs are of limited utility without some examination of the numbers of nurses the programs are turning out. Table I gave average graduations for all RN-preparatory programs and revealed them to be less productive of graduates than medical school programs. In Table V (page 11) we can review the productivity of RN programs by program type.

In the nation as a whole, and especially in the SREB states, the associate degree programs were markedly less productive than diploma programs and somewhat less than baccalaureate programs. The relatively low productivity of the two-year programs doubtless reflects their newness and thus the probability that the new programs were not yet operating at capacity. The balance may be expected to shift as hospital programs continue to phase out, often in the process merging with community college programs.

Whether overall productivity will increase is another matter. To provide some basis for prediction, Table VI (page 12) indicates 1972–73 admissions to programs in the SREB states.

A quick scan of Tables V and VI reveals at once that numbers admitted exceeded numbers graduated. However, will there actually be an increase by the time those admitted in 1972 are graduating? If we assume an attrition rate of one-third (customarily used as a rule of thumb in colleges generally, as well as in diploma nursing programs), the regional and national picture will be that shown in Table VII (page 13).

Though both region and nation will probably see a decline in actual numbers graduating from hospital programs, the decrease will be more than offset by the growth in the associate and baccalaureate degree programs. Further, the one-third attrition rate is of dubious applicability to associate degree programs. Associate degree students tend to be older than traditional college age: in 1967, 46.9 per cent of the students in associate degree nursing programs were twenty or over, as contrasted with 12.6 per cent of baccalaureate students. In the same year,

TABLE V

Graduations from Programs Preparing for Beginning Practice in Nursing (RN), August 1971–July 1972, SREB States

State	Total Grads.	Diploma				Associate				Baccalaureate			
		No. Prog.*	No. Grads.	% of Grads.	Av. Grads. per Prog.	No. Prog.*	No. Grads.	% of Grads.	Av. Grads. per Prog.	No. Prog.*	No. Grads.	% of Grads.	Av. Grads. per Prog.
Ala.	627	10	306	49	31	8	189	30	24	5	132	21	26
Ark.	303	0	—	—	—	7	229	76	33	2	74	24	37
Fla.	1,358	3	171	13	57	20	980	72	49	6	207	15	35
Ga.	880	8	386	44	48	17	418	48	25	5	76	8	15
Ky.	714	4	130	18	33	14	434	61	31	5	150	21	30
La.	469	5	196	42	39	3	51	11	17	7	222	47	32
Md.	989	10	350	36	35	11	359	36	33	4	280	28	56
Miss.	284	2	27	10	14	10	199	70	20	5	58	20	12
N.C.	998	14	441	44	32	21	290	29	14	11	267	27	24
S.C.	352	2	76	22	38	10	186	53	19	3	90	26	30
Tenn.	817	8	310	38	39	13	391	48	30	5	116	14	23
Tex.	1,817	10	369	20	37	23	856	47	37	12	592	33	49
Va.	965	18	473	49	26	14	243	25	17	6	249	26	42
W.Va.	529	4	186	35	47	9	251	47	28	3	92	17	31
SREB States	11,102	98	3,421	31	35	180	5,076	46	28	79	2,605	23	33
U.S.A.	51,784	543	21,592	42	40	541	19,165	37	35	293	11,027	21	38

*Programs designated as closing in 1972–73 are included.

SOURCE: NLN, *Schools of Nursing—R.N.* (1973).

TABLE VI

Fall Admissions to Nursing Programs Preparing for Beginning Practice (RN), August 1, 1972–December 31, 1972,† SREB States

State	Diploma				Associate				Baccalaureate				All Programs			
	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.
Ala.	9	575	39	63.9	8	337	23	42.1	5	560	38	112.0	22	1,472	100	66.9
Ark.	0	—	—	—	7	630	68	90.0	2	296	32	148.0	9	926	100	102.9
Fla.	1	192	9	192.0	20	1,542	75	77.1	6	322	16	58.7	27	2,056	100	76.1
Ga.	6	401	20	66.8	17	1,182	60	69.5	5	388	20	77.6	28	1,971	100	70.4
Ky.	4	297	18	74.3	14	859	51	61.4	5	524	31	104.8	23	1,680	100	73.0
La.	3	329	26	109.7	3	331	26	110.3	7	620	48	88.6	13	1,280	100	98.5
Md.	7	372	21	53.1	11	943	53	85.7	3	458	26	152.7	21	1,773	100	84.4
Miss.	2	60	6	30.0	10	563	55	56.3	5	396	39	79.2	17	1,019	100	59.9
N.C.	9	402	18	44.7	20	881	40	44.1	11	937	42	85.2	40	2,220	100	55.5
S.C.	1	26	3	26.0	9	493	55	54.8	3	369	42	123.0	13	888	100	68.3
Tenn.	7	554	25	79.1	13	1,004	46	77.2	5	608	28	121.6	25	2,166	100	86.6
Tex.	7	531	13	75.9	23	2,072	50	90.1	11	1,514	37	137.6	41	4,117	100	100.4
Va.	18	750	42	41.7	14	729	41	52.0	6	287	17	47.8	38	1,766	100	46.5
W.Va.	3	225	25	75.0	9	497	54	55.2	3	193	21	64.3	15	915	100	61.0
SREB States	77	4,714	18	61.2	178	12,063	50	67.8	77	7,472	32	97.0	332	24,249	100	73.0
U.S.A.	444	20,710	25	46.6	535	37,322	44	69.8	289	26,627	31	92.1	1,268	84,659	100	66.8

†For programs showing few or no admissions during this period, indicating that admissions are closed before August 1 each year, admissions figures from the previous year are used.

*Not including programs designated as closing.

SOURCE: NLN, *Schools of Nursing—R.N.* (1973).

TABLE VII

Expected Net Increases in Programs Preparing for Beginning Practice in Nursing

	SREB States			United States		
	Dipl.	A.D.	Bac.	Dipl.	A.D.	Bac.
72-73 Admissions	4,183	12,063	7,472	20,710	37,322	26,627
71-72 Graduations	3,421	5,076	2,605	21,592	19,165	11,027
Gross Increase	762	6,987	4,867	-882	18,157	15,600
Less Attrition	-1,394	-4,021	-2,491	-6,903	-12,441	-8,876
Expected Net Increase	-632	2,966	2,376	-7,785	5,716	6,724

32.3 per cent of the associate degree students were married (Knopf, 1972). In view of the recent increase in older-than-college-age students in higher education generally (*Fact Book*, 1973), it seems quite likely that these percentages have gone up. Associate degree students often drop out for a year or two, to return to work for a time or to cope with family situations, then go back to school and finish. It is highly likely, therefore, that since the largest nursing enrollments are expected in the associate degree sector, the anticipated attrition in the long run will be less rather than more.

This will probably mean some increase in per-program productivity. Discounting for the moment the near certainty of attrition, examination of Table VII, showing the mean size of entering classes, suggests that productivity will rise. Whether the actual net increase will be enough to make an impact on unit costs or on the total workforce is a matter for further study.

Table VIII (page 14) gives the same information for selected states outside the Southern region. It will be noted that the ranges are similar, though there seems to be a higher proportion of entering classes averaging over 100 in the baccalaureate group, and a higher proportion averaging over 70 in the associate degree group.

Table IX (page 15) presents in another way the data on size of entering classes in RN programs in the SREB states. It is noteworthy that 62 of the region's 178 associate degree programs, or 35 per cent, admitted fewer than 50 students. Of the South's total of 332 RN-preparatory programs, 190—or 57 per cent—admitted classes in the 26–50 category. Classes averaging 100 or more students were admitted in 38 per cent of the baccalaureate programs and in 24 per cent of all programs.

The data presented up to this point indicate that programs preparing for beginning nursing positions are relatively low in productivity and that, while productivity may improve in the immediate future, there will still be room for quantitative improvement. Before leaving the sub-

TABLE VIII

Fall Admissions to RN-Preparatory Programs in Selected States Outside the South, August 1, 1972–December 31, 1972†

State	Diploma				Associate				Baccalaureate				All Programs			
	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.	No. Prog.*	No. Adm.	% of All Adm.	Av. Adm. per Prog.
West																
Ariz.	0	—	—	—	13	784	70	60.3	2	346	30	173.0	15	1,120	100	74.7
Cal.	6	468	10	78.0	57	3,093	62	54.3	18	1,414	28	78.6	81	4,975	100	61.4
Col.	2	85	9	42.5	6	430	45	71.7	3	448	46	149.3	11	963	100	87.5
Ore.	2	223	26	111.5	7	329	38	47.0	2	314	36	157.0	11	866	100	78.7
Wash.	2	61	4	30.5	13	836	48	64.3	6	838	48	139.7	21	1,735	100	82.6
N.E.																
Mass.	31	1,839	46	59.3	18	1,228	30	68.2	9	972	24	108.0	58	4,039	100	69.6
Maine	4	198	47	49.5	2	96	23	48.0	1	128	30	128.0	7	422	100	60.3
N.J.	21	1,115	38	53.1	13	1,291	44	99.3	6	506	18	84.3	40	2,912	100	72.8
N.Y.	51	3,161	29	62.0	38	4,536	42	119.4	29	3,119	29	108.0	118	10,816	100	91.7
Penn.	71	3,850	65	54.2	12	931	16	77.6	18	1,151	19	64.0	101	5,932	100	58.7
Midwest																
Ill.	34	2,072	38	60.9	29	2,193	40	75.6	12	1,205	22	100.4	75	5,470	100	72.9
Mich.	14	1,193	33	85.2	19	1,251	35	65.8	9	1,014	32	112.7	42	3,548	100	84.5
Minn.	7	600	29	85.7	7	748	37	106.9	9	699	34	77.7	23	2,047	100	89.0
Ohio	33	2,433	48	73.7	23	1,605	31	69.8	9	1,053	21	117.0	65	5,091	100	78.3
Wisc.	9	604	27	67.1	4	347	16	86.8	8	1,247	57	155.9	21	2,198	100	104.7

†For programs showing few or no admissions during this period, indicating that admissions are closed before August 1 each year, admissions figures from the previous year are used.

*Not including programs designated as closing.

SOURCE: NLN, *Schools of Nursing—R.N.* (1973).

TABLE IX

Nursing Programs (RN) in the SREB States by Size of Fall Admissions, August 1, 1972-December 31, 1972*

Fall Admissions	No. of Programs**			
	Diploma	Associate	Baccalaureate	All
0	0	3	0	3
1-25	3	5	1	9
26-50	25	54	10	89
51-75	32	46	23	101
76-100	7	26	12	45
101-125	5	22	10	37
126-150	1	6	5	12
151-above	3	14	14	31
Unknown	1	2	2	5
Totals	77	178	77	332

*For programs showing few or no admissions during this period, indicating that admissions are closed before August 1 each year, admissions figures from the previous year are used.

**Not including programs designated as closing.

SOURCE: NLN, *Schools of Nursing—R.N.* (1973).

ject of numbers, we should ascertain whether there is a relationship between program productivity on the one hand and number of programs in proportion to size of population on the other.

Tables I and IV show the states with the greatest average number of graduates per program to be:

All RN Programs	Diploma Programs	Associate Degree Programs	Baccalaureate Programs
Florida (46.8)	Florida (57)	Florida (49)	Maryland (56)
Texas (40.3)	Georgia (48)	Texas (37)	Texas (49)
Maryland (39.6)	West Virginia (47)	Arkansas (33)	Virginia (42)
		Maryland (33)	

Analysis of the data on numbers of programs and size of state population from Table I indicates that many of the same states have a relatively high ratio of population to RN programs; that is, a larger population pool for each program to recruit from and a larger population as a base

from which to draw resources. The SREB states have one RN program to each X number of population as follows:

1. Texas	258,886	8. Tennessee	161,240
2. Florida	250,310	9. Alabama	152,609
3. Louisiana	248,000	10. Kentucky	149,954
4. Arkansas	219,777	11. Mississippi	133,118
5. South Carolina	190,357	12. Virginia	125,368
6. Georgia	162,758	13. North Carolina	113,348
7. Maryland	162,240	14. West Virginia	111,312

Obviously there is not exact correlation of program productivity with size of population served per program: Maryland, which ranks high in productivity in three categories, is seventh on the latter list; and Virginia and West Virginia are low on the program-per-population scale, though among the higher producers in one category each. However, there is enough correlation to warrant further examination.

It would be irresponsible to conclude that size of population to be served should be the governing consideration in decisions to establish programs to prepare RNs. There are other factors, geography being one that has been invoked often in an attempt to overcome the maldistribution of the supply of RNs. Geographical considerations have been thought especially important in the case of associate degree students, many of whom are married and therefore less mobile, in contrast to baccalaureate students, the majority of whom have traditionally been single and of conventional college age. (The profile of the traditional baccalaureate student may be expected to change in the near future as more and more adults and other "non-traditional" students enroll at all levels of education; see *Fact Book*, 1973.)

Because of the newness of many programs, especially in the associate degree category, it would be unfair to come to any closure on the productivity issue now. No guidelines have been determined for ascertaining the optimal number of programs within a geographical area. The National Commission for the Study of Nursing and Nursing Education has helped to establish statewide planning groups for nursing. Without knowing the future roles nursing graduates will be called upon to assume, planning is difficult and hazardous. Before state planning groups recommend any additional programs, it is to be hoped that they will take a hard look at the costs and benefits of those already operational. Are some of the newer programs, established with the idea that they would relieve the nursing shortage in a given geographical area, really doing so? Are there differences in where they are doing so and where they are not—urban/rural differences, for example? If they are not

doing so, what is the cost of this failure? If they are, are they simply satisfying the demands of local hospitals, or are they meeting the real, emerging needs of the health care system?

Program Quality

Data on numbers and size of programs say nothing about program quality, unless large enrollment is taken as one possible indicator of high quality (i.e., "word gets around"). Statistics for most other indices are not readily available. However, we do have access to figures on faculty preparation. To educate quality nurses at any level, one must have qualified teachers. The National League for Nursing, committed to peer review, considers the master's degree as a necessary requirement for teaching in the nation's nursing schools. In 1970, 15,555 nurses were employed full time as faculty members in schools and programs of nursing. Of this number only 6,781 persons or 43.6 per cent were holders of the master's degree. Moreover, 13.3 per cent of all nurse teachers either held the same degree as their students or, what is worse, were instructing students who held degrees higher than their own. *Fifty-four per cent of nurses teaching are not educationally prepared to do so if the criterion is the first graduate degree.* (According to a recent study by the American Council on Education, among college teachers in all fields, 5.8 per cent of men, and 7.5 per cent of women hold less than the master's degree—*Chronicle of Higher Education*, August 27, 1973.) Table X presents a breakdown of these data.

TABLE X

Faculty Preparation in Schools of Nursing, U.S.A.

Employing Programs	Total	Faculty Members									
		Holding Diploma		Holding Associate		Holding Baccalaureate		Holding Master's		Holding Doctorate	
	N	N	%	N	%	N	%	N	%	N	%
Diploma	8,207	1,933	23.6	49	0.6	4,733	57.7	1,473	17.9	19	0.2
Associate	2,461	36	1.4	24	1.0	947	38.5	1,444	58.7	10	0.4
Baccalaureate & Higher	4,887	21	0.4	5	0.1	692	14.2	3,864	79.1	305	6.2
Vocational	3,844	1,864	48.5	108	2.8	1,622	42.2	250	6.5	0	0

SOURCE: NLN, *Nurse-Faculty Census: 1972* (1972).

Data for the SREB states are not available for either diploma or vocational programs, but in 1972, 155 associate degree programs in the South

reported that 53 per cent of their 1,567 faculty members held less than a master's degree. In 72 Southern baccalaureate programs in the same year, 14 per cent of 1,832 faculty members also held less than a master's degree. Southern associate degree and baccalaureate programs reported 227.4 budgeted faculty positions vacant in the fall of 1973 (Newton and Pemberton, 1973).

Lack of qualified faculty was singled out as a serious problem by Miss Jessie Scott in her address to the Southern Regional Council on Collegiate Education for Nursing in 1972:

> The number of nurses qualified for teaching represents but a handful of the total active nurse work-force. According to the National League for Nursing, student admissions increased by seventeen per cent from 1970 to 1971. But nurse faculty from 1966 to 1970 increased only about ten per cent. . . . We consider the shortage of qualified nurse educators to be a monumental barrier to nursing progress. (p. 29)

(And it is against such odds, one might add, that we are opening up new programs at the rate of one a week!)

In addition to faculty preparation, most experts would also look at the clinical facilities and the quality of the institution as a whole, in attempting to gauge the quality of a nursing education program. In other words, the institutional location of a program can contribute to or interfere with quality. This is evidently what Luther Christman had in mind in suggesting (1971):

> In order to meet . . . criteria of excellence as well as economies of scale, perhaps the nursing profession should do a coldly analytical examination of the many small and almost incomplete models that now dot the countryside. By incomplete models, I mean those that do not combine teaching, service, and research. (p. 37)

It is beyond the scope and resources of this discussion to analyze the settings and facilities of the nursing programs in the SREB states. We can, however, sketch in some parameters which may suggest general directions for further inquiry.

The combination of teaching, research, and service as resources for nursing education is probably most fully developed in university medical centers. One would therefore assume that nursing programs located in university medical complexes would have an advantage in an effort to become "complete models." The extent to which the potential is there depends, of course, on the overall quality of the medical center

itself; and the extent to which the potential is realized in nursing depends on the vision of those administering the nursing program. The twenty-one baccalaureate programs in the SREB states located in university medical centers are ranked by size of 1970–71 graduating class in Table XI.

TABLE XI

Accredited Baccalaureate Nursing Programs in the SREB States Located in a Medical Center (ranked by size of graduating class 1970-71)*

	Graduations 8/1/70–7/31/71
1. University of Maryland	230
2. Texas Woman's University	180
3. University of Texas (Galveston & Dallas)	132
4. University of Virginia	96
5. University of Alabama (Birmingham)	81
6. Emory University (Georgia)	80
7. Baylor University (Texas)	79
8. Duke University (N.C.)	60
8. Virginia Commonwealth University	60
9. University of North Carolina (Chapel Hill)	55
10. LSU Medical Center (New Orleans)	53
11. University of Florida	50
12. Vanderbilt University (Tennessee)	48
13. West Virginia University	37
14. University of Tennessee (Memphis)	36
15. Medical College of Georgia	34
16. University of Kentucky	32
17. Medical University of South Carolina	27
18. University of Mississippi	20
19. University of Miami (Florida)	19
20. University of Arkansas	11

*Exclusive of new or developing programs as of that date.

It must be remembered that teaching hospitals are selective about the patients they accept for care and study, and often routine health problems such as appendectomies or tonsillectomies are hard to come by in these settings. Also (though this is becoming less true than in the past) medical centers tend to emphasize acute care and to provide little contact with the day-to-day health problems of the community at large. The nursing student in the large medical complex may therefore graduate with insufficient knowledge of the ordinary world of health and illness.

It is conceivable that public colleges and universities, as agencies of state government, may have some advantage over private institutions in arranging with other governmental agencies for a variety of clinical

experiences for students, and that the non-specialized public institution of higher education may therefore be in the best position to provide the student with a viable basis for practice. The baccalaureate programs in the SREB states that fall into this category are ranked in Table XII.

TABLE XII

Accredited Baccalaureate Nursing Programs in the SREB States Located in a Non-specialized Public Institution (ranked by size of graduating class 1970–71)*

	Graduations 1970-71
1. Florida State University	97
2. University of South Carolina	70
3. Northwestern State College of Louisiana	50
4. East Carolina University (N.C.)	42
5. Murray State University (Kentucky)	37
6. University of Southwestern Louisiana	37
7. University of North Carolina (Greensboro)	24
8. State College of Arkansas	23
9. North Carolina A&T State University	22
10. Florida A&M University	16
11. Northeast Louisiana University	14

*Exclusive of new or developing programs as of that date.

The small private institution has a harder time of it to mount and maintain a quality nursing program. This is certainly not to say it has not been done; it is simply to say that the odds against it are greater. When it is done, the achievement reflects moral and financial support from the institution, dedication on the part of the nursing faculty, and a cooperative and favorable climate in the surrounding health agencies. In the SREB states baccalaureate nursing programs are located in the private institutions in Table XIII (page 21).

What we have been saying, in short, is that each type of setting may have certain strengths to offer a nursing program. It is up to the program itself to find and capitalize on them. Quality may be attainable less easily in some places—and perhaps, in some, not at all. Factors favorable or unfavorable to this attainment must be identified and analyzed frankly in any consideration of establishing or closing a program.

Nursing Expertise

Nurses with high-level expertise are sorely needed to provide faculty for quality educational programs. However, the need for nursing expertise is not limited to education. Administration, supervision, clinical specialization, and research are all undersupplied and underserved.

TABLE XIII

Accredited Baccalaureate Nursing Programs in the SREB States Located in Private Institutions (ranked by size of graduating class 1970–71)

	Graduations 1970–71
1. Incarnate Word College (Texas)	50
2. Tuskegee Institute (Alabama)	39
3. Texas Christian University	38
4. Spalding College (Kentucky)	30
5. Columbia Union College (Maryland)	27
6. Dillard University (Louisiana)	26
7. Southern Missionary College (Tennessee)	26
8. Dominican College (Texas)	25
9. Eastern Mennonite College (Virginia)	25
10. West Virginia Wesleyan College	23
11. Berea College (Kentucky)	22
12. Barry College (Florida)	20
13. Lenoir Rhyne College (North Carolina)	16
14. Hampton Institute (Virginia)	14

Educational programs may graduate superb products and send them into beginning practice, but the contribution these new nurses could make to the health care system cannot be realized if those in leadership positions are not knowledgeable and skillful in their jobs, if expert clinical specialists are not present to provide role models and on-the-job learning, and if nursing knowledge cannot be brought to bear on research into health and health care problems.

All professions proclaim their need for persons prepared at the graduate level to assume advanced positions and to direct research, but nursing is perhaps most needful of all. Only 2.7 per cent of the nursing workforce hold a master's degree or above. Nurses with doctorates are extremely few; only about 700 are to be found in a nurse population of some 700,000.

Nursing is aware of its deficiencies in graduate preparation and has been energetically attempting to close the gap. Graduate enrollments in nursing in the nation increased by 38 per cent from 1966 to 1970 (MacDonald, 1973). In the SREB states, the number of masters' programs in nursing increased from 8 in 1955 to 20 in 1973 (both years including three programs in schools of public health). Table XIV (page 22) shows recent growth and present status of masters' degrees awarded in the region.

Table XV (page 22) presents a breakdown of the 1972–73 graduations that gives an indication of what they may mean to areas where expertise is needed.

TABLE XIV

Graduations from Master's Programs in Nursing,* SREB States, 1970-71 and 1972-73

State	Masters' Degrees 1970-71	Masters' Degrees 1972-73	No. Programs 1972-73
Alabama	16	46	1
Arkansas	1	22	2
Florida	33	49	1
Georgia	63	84	2
Kentucky	0	22	1
Louisiana	0	19	2
Maryland	77	123	2
Mississippi	0	16	1
North Carolina	24	70	2
South Carolina	0	10	1
Tennessee	7	21	1
Texas	31	136	2
Virginia	3	17	2
West Virginia	0	0	0
SREB States	255	635	20
U.S.A.	1,542	**	—

*Including schools of public health.
**National figures not available.
SOURCE: Newton and Pemberton (1973).

TABLE XV

Graduations from Master's Degree Programs, SREB States, September 1, 1972-August 31, 1973

Nursing Focus	Total	Functional Purpose of Curriculum				
		Admin.	Supv.	Teaching	Clin. Spec.	Other
Total	*635*	*49*	*22*	*212*	*320*	*32*
Medical-Surgical	*210*	11	6	99	94	—
Rehabilitation	*1*	—	1	—	—	—
Maternal-Child	*51*	—	—	23	28	—
Pediatric	*40*	1	1	15	23	—
Psychiatric/Mental Health	*178*	5	1	54	118	—
Public or Community Health	*59*	—	13	8	38	—
None	*60*	32	—	—	—	28
Other	*36*	—	—	13	19	4

SOURCE: Newton and Pemberton (1973).

Most nurses now holding doctorates have earned them in fields other than nursing. Doctoral programs in nursing *per se* are a relatively recent

development. In 1970–71 five doctoral programs in nursing were functioning in the nation and awarded seven degrees in that year. Since then one program has been established in the SREB region (at Texas Woman's University), which is now in its second year and has 20 candidates currently enrolled.

The general picture of graduate education of nurses, then, is one of growth and optimism. However, Dr. Gwendoline MacDonald, in her recent study for SREB of manpower and education needs in nursing, sounds a cautionary note:

> Graduate education in SREB states has made great strides during the past few years, but there is considerable evidence of major problems within the system. The phasing out of federal support to graduate students and for research in nursing is creating monumental problems for graduate programs in nursing. . . . The withdrawal of federal assistance from specific areas such as psychiatric-mental health nursing, traineeships and fellowships for graduate study, capitation grants which supported needed faculty in many schools, and construction grants will undoubtedly create serious questions as to the viability of some graduate programs. (p. 27)

It is to be fervently hoped that the maintaining and strengthening of healthy graduate programs will receive high priority in the distribution of funds in nursing education. Failing to devise a strategy for increasing the number of nurses holding graduate degrees, nursing may be forced to redefine the boundaries of nursing practice.

CONCLUSIONS

External pressures on nursing, created by ongoing changes in the health care delivery system, seem to be urging the profession to redefine its role in an upward direction—that is, toward a higher level of professionalism. "The nursing of tomorrow will need to encompass community-wide planning, long-range thinking, relevant high-impact care, and day-in and day-out support to patients and families" (Scott, p. 43). Such activities are a far cry from what many of our graduates are now prepared to do. At the same time, it would be unrealistic to assume that the time will ever come when we do not also need people to do what current graduates *are* prepared to do. It is conceivable that the nursing workforce of the future will become more stratified. At the same time, by virtue of this very fact, clearer definition of levels and types may make for smoother intraprofessional relationships. Nursing education

has an obligation to help clarify and strengthen the total professional structure.

To do so, we must come to consensus on answers to such questions as these:

—What are the tasks to be performed in the emerging health care delivery system that nursing will be expected to do? will be prepared to do?

—What are the professional and subprofessional levels of these tasks?

—What are the human, conceptual, and functional skills required for these tasks?

—What is the knowledge base for these skills at each level?

—What kinds of educational programs can best prepare people with this knowledge and these skills at each level?

Without such decisions on which to base curricular designs, it is only compounding perplexity to continue multiplying educational programs.

Even if such decisions were already made and agreed upon, the issue of numbers of programs remains. Whatever the answers to the questions posed above, it will require strong, stable programs to implement solutions. Human and financial resources are already overtaxed by the number of programs we now have. This is true in the nation as a whole, but especially so in the SREB states, where program productivity is less and where financial limitations are greater.

> While there is real need for additional nurse manpower in the South, plans for development of any new educational programs to prepare for entry into the field or for graduate preparation should be assessed very carefully in terms of the alternatives available. Attention should be directed to providing adequate support to strengthen programs already in existence and to-toward increasing coordination and collaboration among programs to improve utilization of personnel and resources. (MacDonald, p. 43)

To make the best use of the resources we have and to insure development of a nursing workforce adequate to the tasks being set before it will require planning, restructuring, and collaboration. Only through a cooperative effort to build on strengths and minimize weaknesses can we expect to achieve a system of nursing education equal to the challenge.

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APPENDIX A

Supplementary Educational and Health Data, by States

The information in this appendix is organized by states; under each state of the Southern region we are presenting three categories of information: first, basic data concerning population and education; second, statistics concerning the state's out-patient health services; and third, statistics concerning the state's in-patient health facilities.

We have relied on two sources for this information. The facts in the first section for each state are from *Fact Book on Higher Education in the South: 1971 and 1972* (Atlanta: Southern Regional Education Board, 1972). This material is up-to-date, the most recent that is available. However, the material in the second and third section for each state is not as recent. The source we have used for these sections is *Health Resources Statistics: Health Manpower and Health Facilities, 1971*, DHEW Publication No. (NSM) 72-1509 (Washington, D.C.: Government Printing Office, 1972). We are presenting these facts in an appendix rather than in the main text because more up-to-date data than these, which were collected in 1971 and which therefore are probably somewhat older than that, are not yet available.

Alabama

Population (1972 estimated)	3,510,000
Percent urban (1970)	58.4
Per capita personal income (1971)	$3,050
Institutions of higher education (1971)	
Number of private	20
Percent of enrollment	15
Number of public	29
Percent of enrollment	85
State operational appropriations for higher education per full-time equivalent student (1971–72)	$936

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*145*	*720.9*	*979.8*
Gen'l med.-surg.	135	711.1	930.2
Specialty	10	9.8	49.2
Psychiatric	3	4.4	27.0
Chronic or geriatric	—	—	2.9
Tuberculosis	5	3.1	4.5
Other*	2	2.3	14.8
Psychiatric services	28	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	7	—	—

*Includes e[illegible] ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitati[illegible] and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Nat'l
Acute-care Settings				
Total	*148*	*27,458*	*8.1*	*7.6*
Gen'l med.-surg.	135	17,167	5.0	5.0
Specialty	13	10,291	3.0	2.6
Psychiatric	4	9,112	2.7	2.2
Chronic disease or geriatric	0	—	—	0.2
Tuberculosis	7	1,125	0.3	0.1
Other*	2	54	0.0	0.2
Nursing Care Homes				
Total	*176*	—	*36.0***	*48.5***
Nursing Care	161	—	34.1	36.2
Personal Care				
with Nursing	10	—	1.5	9.0
without Nursing	5	—	0.4	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*38*	—	—	—
Deaf or blind	1	—	—	—
Unwed mothers	1	—	—	—
Physically handicapped	1	—	—	—
Mentally retarded	1	—	—	—
Emotionally disturbed	1	—	—	—
Dependent children	17	—	—	—
Other***	16	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Arkansas

Population (1972 estimated)	1,978,000
Percent urban (1970)	50
Per capita personal income (1971)	$3,036
Institutions of higher education (1971)	
Number of private	11
Percent of enrollment	16
Number of public	9
Percent of enrollment	84
State operational appropriations for higher education per full-time equivalent student (1971–72)	$909

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*106*	*497.2*	*979.3*
Gen'l med.-surg.	102	485.7	930.2
Specialty	4	11.5	49.2
Psychiatric	1	3.8	27.0
Chronic or geriatric	1	2.0	2.9
Tuberculosis	1	2.1	4.5
Other*	1	3.7	14.8
Psychiatric services	9	—	—
Comprehensive Health Service Programs (fed'l funding)	0	—	—
Comprehensive Mental Health Centers (fed'l funding)	7	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*106*	*11,192*	*5.8*	*7.6*
Gen'l med.-surg.	102	10,010	5.2	5.0
Specialty	4	1,182	0.6	2.6
Psychiatric	1	638	0.3	2.2
Chronic disease or geriatric	1	121	0.1	0.2
Tuberculosis	1	343	0.2	0.1
Other*	1	80	0.0	0.2
Nursing Care Homes				
Total	*191*	—	*54.5***	*48.5***
Nursing Care	181	—	51.7	36.2
Personal Care with Nursing	10	—	2.9	9.0
without Nursing	0	—	—	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*34*	—	—	—
Deaf or blind	4	—	—	—
Unwed mothers	1	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	3	—	—	—
Emotionally disturbed	4	—	—	—
Dependent children	12	—	—	—
Other***	10	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Florida

Population (1972 estimated)	7,259,000
Percent urban (1970)	81
Per capita personal income (1971)	$3,848
Institutions of higher education (1971)	
Number of private	28
Percent of enrollment	19
Number of public	36
Percent of enrollment	81
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,220

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*217*	*921.6*	*979.3*
Gen'l med.-surg.	204	876.4	930.2
Specialty	13	45.1	49.2
Psychiatric	8	43.0	27.0
Chronic or geriatric	0	—	2.9
Tuberculosis	0	—	4.5
Other*	5	2.1	14.8
Psychiatric services	34	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	12	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Nat'l
Acute-care Settings				
Total	*224*	*46,600*	*7.0*	*7.6*
Gen'l med.-surg.	206	33,842	5.1	5.0
Specialty	18	12,758	1.9	2.6
Psychiatric	11	11,356	1.7	2.2
Chronic disease or geriatric	0	0	—	0.2
Tuberculosis	2	990	0.1	0.1
Other*	5	412	0.1	0.2
Nursing Care Homes				
Total	*322*	—	*27.3***	*48.5***
Nursing Care	259	—	22.5	36.2
Personal Care with Nursing	29	—	3.7	9.0
Personal Care without Nursing	32	—	1.1	3.3
Domiciliary Care	2	—	—	0.1
Other In-patient Facilities				
Total	*121*	—	—	—
Deaf or blind	1	—	—	—
Unwed mothers	10	—	—	—
Physically handicapped	2	—	—	—
Mentally retarded	17	—	—	—
Emotionally disturbed	5	—	—	—
Dependent children	27	—	—	—
Other***	59	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Georgia

Population (1972 estimated)	4,720,000
Percent urban (1970)	60
Per capita personal income (1971)	$3,547
Institutions of higher education (1971)	
Number of private	33
Percent of enrollment	19
Number of public	28
Percent of enrollment	81
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,325

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*192*	*1,092.1*	*979.3*
Gen'l med.-surg.	174	1,050.7	930.2
Specialty	18	41.4	49.2
Psychiatric	10	35.4	27.0
Chronic or geriatric	1	3.0	2.9
Tuberculosis	0	—	4.5
Other*	7	2.9	14.8
Psychiatric services	48	—	—
Comprehensive Health Service Programs (fed'l funding)	1	—	—
Comprehensive Mental Health Centers (fed'l funding)	11	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*202*	*33,624*	*7.5*	*7.6*
Gen'l med.-surg.	180	21,782	4.8	5.0
Specialty	22	11,842	2.6	2.6
Psychiatric	12	11,087	2.5	2.2
Chronic disease or geriatric	1	64	0.0	0.2
Tuberculosis	1	354	0.1	0.1
Other*	8	337	0.1	0.2
Nursing Care Homes				
Total	*215*	—	*39.7***	*48.5***
Nursing Care	188	—	37.6	36.2
Personal Care with Nursing	14	—	1.3	9.0
Personal Care without Nursing	13	—	0.8	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*79*	—	—	—
Deaf or blind	4	—	—	—
Unwed mothers	2	—	—	—
Physically handicapped	3	—	—	—
Mentally retarded	4	—	—	—
Emotionally disturbed	7	—	—	—
Dependent children	28	—	—	—
Other***	31	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Kentucky

Population (1972 estimated)	3,299,000
Percent urban (1970)	52
Per capita personal income (1971)	$3,288
Institutions of higher education (1971)	
Number of private	28
Percent of enrollment	19
Number of public	22
Percent of enrollment	81
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,753

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*131*	*911.9*	*979.3*
Gen'l med.-surg.	113	873.8	930.2
Specialty	18	38.1	49.2
Psychiatric	5	13.5	27.0
Chronic or geriatric	0	—	2.9
Tuberculosis	7	13.8	4.5
Other*	6	10.9	14.8
Psychiatric services	9	—	—
Comprehensive Health Service Programs (fed'l funding)	3	—	—
Comprehensive Mental Health Centers (fed'l funding)	22	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*135*	*20,188*	*6.4*	*7.6*
Gen'l med.-surg.	116	14,985	4.7	5.0
Specialty	19	5,203	1.6	2.6
Psychiatric	6	3,578	1.1	2.2
Chronic disease or geriatric	0	0	—	0.2
Tuberculosis	7	888	0.3	0.1
Other*	6	737	0.2	0.2
Nursing Care Homes				
Total	*295*	—	*39.3***	*48.5***
Nursing Care	125	—	19.4	36.2
Personal Care with Nursing	108	—	14.8	9.0
Personal Care without Nursing	62	—	5.1	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*71*	—	—	—
Deaf or blind	2	—	—	—
Unwed mothers	1	—	—	—
Physically handicapped	1	—	—	—
Mentally retarded	3	—	—	—
Emotionally disturbed	2	—	—	—
Dependent children	36	—	—	—
Other***	26	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Louisiana

Population (1972 estimated)	3,720,000
Percent urban (1970)	66
Per capita personal income (1971)	$3,248
Institutions of higher education (1971)	
Number of private	11
Percent of enrollment	16
Number of public	12
Percent of enrollment	84
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,454

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*154*	*1,124.7*	*979.3*
Gen'l med.-surg.	144	1,094.7	930.2
Specialty	10	30.0	49.2
Psychiatric	3	7.6	27.0
Chronic or geriatric	1	0.6	2.9
Tuberculosis	1	4.3	4.5
Other*	5	17.5	14.8
Psychiatric services	33	—	—
Comprehensive Health Service Programs (fed'l funding)	0	—	—
Comprehensive Mental Health Centers (fed'l funding)	12	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*159*	*24,972*	*6.9*	*7.6*
Gen'l med.-surg.	147	17,364	4.8	5.0
Specialty	12	7,608	2.1	2.6
Psychiatric	4	5,845	1.6	2.2
Chronic disease or geriatric	2	1,107	0.3	0.2
Tuberculosis	1	306	0.1	0.1
Other*	5	350	0.1	0.2
Nursing Care Homes				
Total	*184*	—	*40.1***	*48.5***
Nursing Care	177	—	39.1	36.2
Personal Care with Nursing	6	—	0.9	9.0
Personal Care without Nursing	0	—	—	3.3
Domiciliary Care	1	—	—	0.1
Other In-patient Facilities				
Total	*62*	—	—	—
Deaf or blind	5	—	—	—
Unwed mothers	6	—	—	—
Physically handicapped	1	—	—	—
Mentally retarded	12	—	—	—
Emotionally disturbed	7	—	—	—
Dependent children	17	—	—	—
Other***	14	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Maryland

Population (1972 estimated)	4,056,000
Percent urban (1970)	77
Per capita personal income (1971)	$4,514
Institutions of higher education (1971)	
Number of private	24
Percent of enrollment	20
Number of public	24
Percent of enrollment	80
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,257

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*75*	*1,283.9*	*979.3*
Gen'l med.-surg.	56	1,230.9	930.2
Specialty	19	53.0	49.2
Psychiatric	13	34.4	27.0
Chronic or geriatric	2	0.1	2.9
Tuberculosis	0	—	4.5
Other*	4	18.6	14.8
Psychiatric services	59	—	—
Comprehensive Health Service Programs (fed'l funding)	2		—
Comprehensive Mental Health Centers (fed'l funding)	7	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*84*	*29,032*	*7.5*	*7.6*
Gen'l med.-surg.	57	15,127	3.9	5.0
Specialty	27	13,905	3.6	2.6
Psychiatric	14	10,668	2.8	2.2
Chronic disease or geriatric	5	1,449	0.4	0.2
Tuberculosis	2	442	0.1	0.1
Other*	6	1,346	0.3	0.2
Nursing Care Homes				
Total	*230*	—	*49.9***	*48.5***
Nursing Care	188	—	41.8	36.2
Personal Care				
with Nursing	26	—	7.2	9.0
without Nursing	16	—	0.9	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*72*	—	—	—
Deaf or blind	2	—	—	—
Unwed mothers	2	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	9	—	—	—
Emotionally disturbed	10	—	—	—
Dependent children	9	—	—	—
Other***	40	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Mississippi

Population (1972 estimated)	2,263,000
Percent urban (1970)	45
Per capita personal income (1971)	$2,766
Institutions of higher education (1971)	
Number of private	17
Percent of enrollment	12
Number of public	24
Percent of enrollment	88
State operational appropriations for higher education per full-time equivalent student (1971–72)	$868

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*132*	*668.7*	*979.8*
Gen'l med.-surg.	125	664.3	930.2
Specialty	7	4.4	49.2
Psychiatric	1	0.8	27.0
Chronic or geriatric	2	0.2	2.9
Tuberculosis	1	0.7	4.5
Other*	3	2.7	14.8
Psychiatric services	5	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	6	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*134*	*17,815*	*8.1*	*7.6*
Gen'l med.-surg.	126	11,550	5.3	5.0
Specialty	8	6,265	2.9	2.6
Psychiatric	2	5,876	2.7	2.2
Chronic disease or geriatric	2	100	0.0	0.2
Tuberculosis	1	252	0.1	0.1
Other*	3	37	0.0	0.2
Nursing Care Homes				
Total	*99*	—	*19.3***	*48.5***
Nursing Care	69	—	15.8	36.2
Personal Care				
with Nursing	17	—	2.5	9.0
without Nursing	12	—	1.0	3.3
Domiciliary Care	1	—	0.1	0.1
Other In-patient Facilities				
Total	*22*	—	—	—
Deaf or blind	3	—	—	—
Unwed mothers	1	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	1	—	—	—
Emotionally disturbed	0	—	—	—
Dependent children	7	—	—	—
Other***	10	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

North Carolina

Population (1972 estimated)	5,214,000
Percent urban (1970)	45
Per capita personal income (1971)	$3,387
Institutions of higher education (1971)	
Number of private	44
Percent of enrollment	27
Number of public	54
Percent of enrollment	73
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,600

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*165*	*889.0*	*979.3*
Gen'l med.-surg.	147	866.3	930.2
Specialty	18	22.7	49.2
Psychiatric	5	6.4	27.0
Chronic or geriatric	1	0.1	2.9
Tuberculosis	3	2.3	4.5
Other*	9	13.8	14.8
Psychiatric services	49	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	16	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Nat'l
Acute-care Settings				
Total	*173*	*33,367*	*6.7*	*7.6*
Gen'l med.-surg.	147	21,639	4.4	5.0
Specialty	26	11,728	2.4	2.6
Psychiatric	7	9,793	2.0	2.2
Chronic disease or geriatric	1	73	0.0	0.2
Tuberculosis	4	1,102	0.2	0.1
Other*	14	760	0.2	0.2
Nursing Care Homes				
Total	*770*	—	*44.4***	*48.5***
Nursing Care	185	—	21.1	36.2
Personal Care				
with Nursing	270	—	16.2	9.0
without Nursing	302	—	7.0	3.3
Domiciliary Care	13	—	0.1	0.1
Other In-patient Facilities				
Total	*103*	—	—	—
Deaf or blind	4	—	—	—
Unwed mothers	2	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	11	—	—	—
Emotionally disturbed	2	—	—	—
Dependent children	30	—	—	—
Other***	54	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

South Carolina

Population (1972 estimated)	2,665,000
Percent urban (1970)	48
Per capita personal income (1971)	$3,162
Institutions of higher education (1971)	
Number of private	24
Percent of enrollment	30
Number of public	22
Percent of enrollment	70
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,365

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*90*	*1,024.4*	*979.3*
Gen'l med.-surg.	81	1,012.0	930.2
Specialty	9	12.4	49.2
Psychiatric	4	9.7	27.0
Chronic or geriatric	1	0.0	2.9
Tuberculosis	1	0.1	4.5
Other*	3	2.6	14.8
Psychiatric services	12	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	6	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Nat'l
Acute-care Settings				
Total	*93*	*19,387*	*7.7*	*7.6*
Gen'l med.-surg.	82	12,145	4.8	5.0
Specialty	11	7,242	2.9	2.6
Psychiatric	5	6,481	2.6	2.2
Chronic disease or geriatric	2	79	0.0	0.2
Tuberculosis	1	568	0.2	0.1
Other*	3	114	0.0	0.2
Nursing Care Homes				
Total	*95*	—	*29.4***	*48.5***
Nursing Care	79	—	25.8	36.2
Personal Care				
with Nursing	7	—	2.6	9.0
without Nursing	9	—	1.0	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*34*	—	—	—
Deaf or blind	0	—	—	—
Unwed mothers	1	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	2	—	—	—
Emotionally disturbed	2	—	—	—
Dependent children	18	—	—	—
Other***	11	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Tennessee

Population (1972 estimated)	4,031,000
Percent urban (1970)	59
Per capita personal income (1971)	$3,325
Institutions of higher education (1971)	
Number of private	41
Percent of enrollment	25
Number of public	18
Percent of enrollment	75
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,230

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*162*	*708.8*	*979.3*
Gen'l med.-surg.	143	657.7	930.2
Specialty	19	51.1	49.2
Psychiatric	8	27.4	27.0
Chronic or geriatric	2	6.0	2.9
Tuberculosis	2	0.3	4.5
Other*	7	17.5	14.8
Psychiatric services	30	—	—
Comprehensive Health Service Programs (fed'l funding)	3	—	—
Comprehensive Mental Health Centers (fed'l funding)	8	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*174*	*30,274*	*7.8*	*7.6*
Gen'l med.-surg.	150	20,549	5.3	5.0
Specialty	24	9,725	2.5	2.6
Psychiatric	8	8,053	2.1	2.2
Chronic disease or geriatric	2	685	0.2	0.2
Tuberculosis	3	474	0.1	0.1
Other*	11	513	0.1	0.2
Nursing Care Homes				
Total	*216*	—	*29.1***	*48.5***
Nursing Care	171	—	22.9	36.2
Personal Care				
with Nursing	24	—	5.3	9.0
without Nursing	20	—	0.9	3.3
Domiciliary Care	1	—	0.0	0.1
Other In-patient Facilities				
Total	*78*	—	—	—
Deaf or blind	2	—	—	—
Unwed mothers	5	—	—	—
Physically handicapped	0	—	—	—
Mentally retarded	9	—	—	—
Emotionally disturbed	4	—	—	—
Dependent children	37	—	—	—
Other***	21	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Texas

Population (1972 estimated)	11,649,000
Percent urban (1970)	80
Per capita personal income (1971)	$3,682
Institutions of higher education (1971)	
Number of private	53
Percent of enrollment	17
Number of public	76
Percent of enrollment	83
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,226

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*578*	*865.9*	*979.8*
Gen'l med.-surg.	534	820.8	930.2
Specialty	44	45.1	49.2
Psychiatric	16	12.9	27.0
Chronic or geriatric	1	0.0	2.9
Tuberculosis	3	3.0	4.5
Other*	24	29.2	14.8
Psychiatric services	40	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	17	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*601*	*75,713*	*6.9*	*7.6*
Gen'l med.-surg.	547	56,669	5.1	5.0
Specialty	54	19,044	1.7	2.6
Psychiatric	17	13,750	1.2	2.2
Chronic disease or geriatric	2	1,797	0.2	0.2
Tuberculosis	3	1,319	0.1	0.1
Other*	32	2,178	0.2	0.2
Nursing Care Homes				
Total	*900*	—	*56.5***	*48.5***
Nursing Care	745	—	49.6	36.2
Personal Care with Nursing	101	—	5.3	9.0
Personal Care without Nursing	51	—	1.6	3.3
Domiciliary Care	3	—	0.0	0.1
Other In-patient Facilities				
Total	*216*	—	—	—
Deaf or blind	3	—	—	—
Unwed mothers	18	—	—	—
Physically handicapped	5	—	—	—
Mentally retarded	29	—	—	—
Emotionally disturbed	17	—	—	—
Dependent children	76	—	—	—
Other***	68	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

Virginia

Population (1972 estimated)	4,764,000
Percent urban (1970)	63
Per capita personal income (1971)	$3,866
Institutions of higher education (1971)	
Number of private	33
Percent of enrollment	18
Number of public	34
Percent of enrollment	82
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,173

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*127*	*1,109.2*	*979.3*
Gen'l med.-surg.	107	1,078.7	930.2
Specialty	20	30.5	49.2
Psychiatric	10	22.6	27.0
Chronic or geriatric	1	0.2	2.9
Tuberculosis	2	0.2	4.5
Other*	7	7.4	14.8
Psychiatric services	41	—	—
Comprehensive Health Service Programs (fed'l funding)	0	—	—
Comprehensive Mental Health Centers (fed'l funding)	5	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Nat'l
Acute-care Settings				
Total	*137*	*37,013*	*8.3*	*7.6*
Gen'l med.-surg.	110	21,257	4.8	5.0
Specialty	27	15,756	3.5	2.6
Psychiatric	13	14,628	3.3	2.2
Chronic disease or geriatric	1	63	0.0	0.2
Tuberculosis	2	628	0.1	0.1
Other*	11	437	0.1	0.2
Nursing Care Homes				
Total	*262*	—	*29.9***	*48.5***
Nursing Care	137	—	19.7	36.2
Personal Care				
with Nursing	46	—	7.0	9.0
without Nursing	76	—	3.1	3.3
Domiciliary Care	3	—	0.1	0.1
Other In-patient Facilities				
Total	*71*	—	—	—
Deaf or blind	0	—	—	—
Unwed mothers	5	—	—	—
Physically handicapped	1	—	—	—
Mentally retarded	8	—	—	—
Emotionally disturbed	1	—	—	—
Dependent children	28	—	—	—
Other***	28	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

West Virginia

Population (1972 estimated)	1,781,000
Percent urban (1970)	39
Per capita personal income (1971)	$3,228
Institutions of higher education (1971)	
Number of private	11
Percent of enrollment	18
Number of public	13
Percent of enrollment	82
State operational appropriations for higher education per full-time equivalent student (1971–72)	$1,290

Out-patient Health Services

	Number	Patient visits/1,000 pop. State	Nat'l
Hospital Ambulatory Care			
Total	*89*	*1,111.1*	*979.3*
Gen'l med.-surg.	81	1,068.2	930.2
Specialty	8	42.9	49.2
Psychiatric	5	34.8	27.0
Chronic or geriatric	1	7.5	2.9
Tuberculosis	1	0.5	4.5
Other*	1	0.1	14.8
Psychiatric services	14	—	—
Comprehensive Health Service Programs (fed'l funding)	2	—	—
Comprehensive Mental Health Centers (fed'l funding)	5	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

In-patient Health Facilities

	No. of Facilities	No. of Beds	Beds/1,000 pop. State	Beds/1,000 pop. Nat'l
Acute-care Settings				
Total	*94*	*16,530*	*9.5*	*7.6*
Gen'l med.-surg.	83	10,656	6.1	5.0
Specialty	11	5,874	3.4	2.6
Psychiatric	6	4,778	2.7	2.2
Chronic disease or geriatric	2	460	0.3	0.2
Tuberculosis	1	594	0.3	0.1
Other*	2	42	0.0	0.2
Nursing Care Homes				
Total	*62*	—	*13.1***	*48.5***
Nursing Care	43	—	9.1	36.2
Personal Care with Nursing	14	—	3.5	9.0
Personal Care without Nursing	5	—	0.5	3.3
Domiciliary Care	0	—	—	0.1
Other In-patient Facilities				
Total	*35*	—	—	—
Deaf or blind	1	—	—	—
Unwed mothers	4	—	—	—
Physically handicapped	1	—	—	—
Mentally retarded	2	—	—	—
Emotionally disturbed	1	—	—	—
Dependent children	12	—	—	—
Other***	14	—	—	—

*Includes eye, ENT, epileptic, alcoholic, narcotic, maternity, orthopedic, physical rehabilitative, and other hospitals.

**Beds per 1,000 population aged 65 and over.

***Includes homes for alcoholics, sheltered care homes, boarding homes, juvenile correctional facilities, and other similar facilities having health functions.

APPENDIX B

Project Seminar Members

MS. RACHEL BOOTH, Director of Primary Care and Nurse Practitioner Program, School of Nursing, University of Maryland

DR. BARBARA BRODIE, Chairman, Maternal and Child Health Nursing, University of Virginia

DR. SHIRLEY F. BURD, Professor, Psychiatric-Mental Health Nursing, Graduate Education Program, College of Nursing, University of Tennessee-Memphis

DR. WALTON CONNELLY, Director, Education and Training, Methodist Hospital, Indianapolis

MS. HARRIET DECHOW, Chairman, Nursing Education, Manatee Junior College

MS. JOY LYNN DOUGLAS, Director, School of Nursing, Methodist Hospital, Memphis

MS. ROSE L. FOSTER, Executive Assistant to the Dean, School of Health and Social Services, Florida International University

DR. VIRGINIA GOVER, Director, Undergraduate Program, School of Nursing, University of North Carolina at Chapel Hill

DR. JACK GREGG, Director, Program Monitoring, Family Health Foundation, New Orleans

DR. SYLVIA HART, Dean, School of Nursing, University of Tennessee-Knoxville

MS. ROSEMARY HENRION, Clinical Specialist, Psychiatric Division, Biloxi Veteran's Administration Center

DR. GERALDINE LABECKI, Dean, College of Nursing, Clemson University

DR. GWENDOLINE R. MACDONALD, Dean, College of Nursing, University of South Florida

DR. MARY ELIZABETH MILLIKEN, Coordinator, Health Occupations Teacher Education Program, University of Georgia

DR. BOBBY G. MOORE, Assistant Dean, College of Community Health Sciences, University of Alabama

DR. KAY B. PARTRIDGE, Staff Assistant to the Director, Department of Nursing, The Johns Hopkins Hospital, Baltimore

MS. VIRGINIA PHILLIPS, Director, Division of Nursing, South Carolina Department of Health and Environmental Control

MS. MARIE PIEKARSKI, Coordinator, Program Planning and Development, University of Kentucky Community College System

MS. MARION POOL, Project Director, West Virginia Planning Commission for Nursing

MS. GAYE POTEET, Director, School of Nursing, Petersburg General Hospital, Petersburg, Virginia

DR. MARY RERES, Assistant Dean for Graduate Education, School of Nursing, University of Virginia

DR. KENNETH B. ROBERTS, Department of Pediatrics, The Johns Hopkins School of Medicine and The Johns Hopkins Hospital

MS. GEARLEAN M. SLACK, Director, Continuing Education, School of Nursing, West Virginia University Medical Center

MS. MYRTIS SNOWDEN, Professor, Graduate Nursing, Northwestern State University of Louisiana

MS. MABLE SPELL, Clinical Nurse Practitioner, Frontier Nursing Service, Kentucky

MS. NANCY M. STRAND, Director of Nursing, University of Arkansas Medical Center

MR. JOE TAYLOR, Administrator, Northside Hospital, Atlanta

DR. SHIRLEY J. THOMPSON, Associate Professor, School of Nursing, Virginia Commonwealth University

MS. ISOBEL THORP, Director, Pediatric Nurse Practitioner Program, School of Nursing, University of Alabama in Birmingham Medical Center

MS. EVELYN TOMES, Director, Department of Nursing Education, Meharry Medical College

MS. NANCY WILKEY, Assistant Professor, School of Nursing, University of Maryland

MS. ARMENIA WILLIAMS, Department of Nursing, Georgia State University

Ms. Edith Wright, Director, Family Nurse Clinician Project, Texas Woman's University

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Dr. Patricia T. Haase, *Director*

Dr. Mary Howard Smith, *Associate Director*

Ms. Barbara B. Reitt, *Project Assistant*

Ms. Ruth Gray, *Secretary*